This listing of claims replaces all prior versions and listings of claims in the application:

1. (Currently Amended) Method for automatically matching the levels of the signals exchanged between a first apparatus and a second apparatus which communicates with the said first apparatus via a transmission line, characterized in that it comprises the following steps:

the signal which comes from the transmission line and is received by the first apparatus is digitized,

on the basis of the digital data representing the signals exchanged with the transmission line, an estimate is made of the transfer function equal to the ratio of the signal received by the first apparatus to the signal transmitted by the first apparatus, the estimate of the transfer function is defined in the following way:

$$\frac{OUT2}{IN1} = K(Z_L) + \varepsilon$$

where

$$K(Z_L) = \frac{Z_L}{2 \cdot (Z_L + 2 \cdot R_1)}$$

and Z_L represents the impedance of the transmission line, while R1 represents the source impedance of the transmission line,

- the following are calculated:

for the transmitter signal, the first gain G1

$$G1(Z_L) = \frac{1}{1 - 2 \cdot K(Z_L)}$$

and for the received signal, the second gain G2

$$G2(Z_L) = \frac{1}{1 - 2 \cdot K(Z_L)} .$$

each of the exchanged signals is respectively multiplied by a suitable gain determined on the basis of the estimated value of the said transfer function.

2. (Cancelled)

3. (Previously Presented) Method according to Claim 1, characterized in that the gain of the signal received by the first apparatus is chosen so that the component of the signal transmitted by the second apparatus in the signal received by the first apparatus is independent of the impedance of the transmission line.

4. (Previously Presented) Method according to Claim 1, characterized in that the gain of the signal transmitted by the first apparatus is chosen so that the component of this signal in the signal received by the second apparatus is independent of the impedance of the transmission line.

5. (Previously Presented) Method according to Claim 3, characterized in that the said calculation method implements an identification algorithm.

6. (Cancelled)

7. (Currently Amended) Device according to Claim [[6],] 12 characterized in that the block has a unit for identifying the transfer function interacting with a calculation module which is intended to supply a first amplification means with the first gain for matching the level of the signal transmitted by the first apparatus, and to supply a second amplification means with the second gain (G2) for matching the level of the signal received by the first apparatus.

8. (Currently Amended) Device according to Claim [[5],] 12 characterized in that the calculation block has a DSP circuit implementing an identification algorithm.

9. (Previously Presented) Device according to Claim 8, characterized in that the identification algorithm is of the LMS, RLS or Kalman type.

10. (Previously Presented) Communication apparatus, characterized in that it has a device according to Claim 6.

11. (Previously Presented) Method for automatically matching the levels of the signals

exchanged between a first apparatus and a second apparatus that communicates with the first apparatus via a transmission line, comprising the steps:

receiving and digitizing by the first apparatus the signal which comes from the transmission line,

estimating, on the basis of the digital data representing the signals exchanged with the transmission line, the transfer function (K) equal to the ratio of the signal received by the first apparatus to the signal transmitted by the first apparatus, the estimate of the transfer function (K) comprising $\frac{OUT2}{IN1} = K(Z_L) + \varepsilon$ where $K(Z_L) = \frac{Z_L}{2 \cdot (Z_L + 2 \cdot R_1)}$ and Z_L represents the impedance of the transmission line , while R1 represents the source impedance of the transmission line, the following are calculated: for the transmitter signal, the first gain G1 comprises $G1(Z_L) = \frac{1}{1 - 2 \cdot K(Z_L)}$ and for the received signal, the second gain G2 comprises $G2(Z_L) = \frac{1}{1 - 2 \cdot K(Z_L)}$, and

multiplying each of the exchanged signals, respectively, by a suitable gain determined on the basis of the estimating of a value of the transfer function (K).

12. (Previously Presented) Device for automatically matching the levels of signals exchanged between a first apparatus and a second apparatus communicating via a transmission line, characterized in that it has:

an analogue/digital converter capable of digitizing a signal entering the first apparatus,

a digital/analogue converter capable of converting a signal transmitted by the first apparatus,

a calculation block intended to estimate the ratio of the incoming signal to the signal transmitted by the first apparatus, and to determine the gains needed for matching the levels of the signals transmitted and received by the first apparatus, the gains being dependent a transfer function (K) equal to the ratio of the incoming signal received by the first apparatus to the signal transmitted by the first apparatus, the estimate of the transfer function (K) comprising $\frac{OUT2}{IN1} = K(Z_L) + \varepsilon$ where $K(Z_L) = \frac{Z_L}{2 \cdot (Z_L + 2 \cdot R_1)}$ and Z_L represents the impedance of the transmission line , while R1 represents the source impedance of the transmission line, the following are calculated: for the signal transmitted, the first gain G1 comprises $G1(Z_L) = \frac{1}{1 - 2 \cdot K(Z_L)}$ and for the incoming signal received, the second gain G2 comprises $G2(Z_L) = \frac{1}{1 - 2 \cdot K(Z_L)}$.